

APPENDIX E

UNDERSTANDING

PESTICIDE

REGULATIONS

TERMS USED IN THE MATERIAL FACT SHEETS

REENTRY INTERVAL (REI)

The REI is the period of time designated by the federal Worker Protection Standard (WPS) between the application of certain hazardous pesticides to crops, and the allowed entrance of workers into the field without protective clothing. The product label will indicate what type of protective clothing is needed to enter the field prior to completion of REI. WPS is part of the regulations the Environmental Protection Agency (EPA) implemented as part of the Federal Insecticide Fungicide and Rodenticide Act (FIFRA). It can be found at 40 CFR Part 170.

PRE-HARVEST INTERVAL (PHI): The minimum number of days permitted by law (FIFRA) between the final application of a particular pesticide and the harvest of the crop. This will be indicated on the product label.

EPA SIGNAL WORD: Pesticides are labeled with a signal word based on their levels of toxicity.

Class	Toxicity	Signal Word
Class I	highly toxic,	"Danger" or "Danger - Poison"
Class II	moderately toxic	"Warning"
Class III	slightly toxic	"Caution"
Class IV	relatively non-toxic	"Caution"

PESTICIDE FORMULATIONS PERMITTED IN ORGANIC PRODUCTION

The USDA-NOP regulation requires that pesticides must have active ingredients that are either considered natural, or are synthetic and appear on the National List (7CFR 205.600-607). All inert ingredients must be classified as List 4 (List 4A or 4B) by the EPA. List 3 inert ingredients may be permitted if individually reviewed and added to the NOP's National List. Generally, nearly all synthetics are prohibited, unless they appear on the National List, and all naturals are allowed, unless they appear on the list as prohibited. Listed synthetics must be used as indicated, such as for disease or insect control, and may have further restrictions on crop or method of application. For instance, boric acid is limited to use in structural pest control, with no crop contact.

Inert ingredients in pesticides are those ingredients that are not intended to affect a target pest but are added to enhance some characteristic such as the pesticides solubility in water. Inerts are not necessarily harmless and

some inerts may be quite toxic, and make up a large percentage of the product. FIFRA does not require inert ingredients to be identified by name and percentage on the product label. However, the total percentage of inert ingredients must be declared.

The EPA classifies inert ingredients in four lists.

- List 1 (Inert Ingredients of Toxicological Concern)
- List 2 (Potentially Toxic Other Ingredients/High Priority for Testing Inerts)
- List 3 (Inerts of Unknown Toxicity)
- List 4A (Inert Ingredients of Minimal Concern)
- List 4B (Other ingredients for which EPA has sufficient information to reasonably conclude that the current use pattern in pesticide products will not adversely affect public health or the environment.)

REGISTERED OR EXEMPT PESTICIDES

Under FIFRA, any product making a pesticidal claim must be registered with EPA, in order to review products for reasons of human health and environmental safety. Registration is indicated by the presence of an EPA registration number in small print on the label. FIFRA rules generally require that farmers use only pesticides that are approved by EPA, and labeled for the food crop in question.

An exception to this rule exists for products based on certain active ingredients (the "25b list," named for that section of FIFRA), which are considered minimum risk products. These products will not have an EPA registration number, and usually have a statement to the effect that "the manufacturer represents that this product qualifies for exemption from FIFRA." For exempt pesticides, all inert ingredients must be on EPA List 4A, and must be disclosed on the label. In addition, all active and inert ingredients must have a residue tolerance (or tolerance exemption) established for any food or animal feed crop that is listed on the label. Tolerances are the maximum legally permissible levels of pesticide residues, including active and inert ingredients, which may be found in foods. Some states require that the 25b exempt pesticides be registered with the state pesticide agency in order to be permitted in that state.

Many exempt products, but not all, meet the requirements of the USDA National Organic Program.

ACTIVE INGREDIENTS THAT MAY BE IN MINIMUM RISK PESTICIDE PRODUCTS

Exempted from EPA Registration under section 25(b) of FIFRA

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| 1. Castor Oil (U.S.P. or equivalent) | 20. Peppermint* and Peppermint Oil* |
| 2. Cedar Oil | 21. 2-Phenethyl Propionate (2-phenylethyl propionate) |
| 3. Cinnamon* and Cinnamon Oil * | 22. Potassium Sorbate |
| 4. Citric Acid* | 23. Putrescent Whole Egg Solids (See 180.1071) |
| 5. Citronella and Citronella Oil | 24. Rosemary * and Rosemary Oil* |
| 6. Cloves* and Clove Oil* | 25. Sesame* (includes ground Sesame plant stalks) (See 180.1087) and Sesame Oil* |
| 7. Corn Gluten Meal* | 26. Sodium Chloride (common salt)* |
| 8. Corn Oil* | 27. Sodium Lauryl Sulfate |
| 9. Cottonseed Oil* | 28. Soybean Oil |
| 10. Dried Blood | 29. Thyme* and Thyme Oil* |
| 11. Eugenol | 30. White Pepper* |
| 12. Garlic* and Garlic Oil* | 31. Zinc Metal Strips (consisting solely of zinc metal and impurities) |
| 13. Geraniol | |
| 14. Geranium Oil | |
| 15. Lauryl Sulfate | |
| 16. Lemon grass Oil* | |
| 17. Linseed Oil | |
| 18. Malic Acid* | |
| 19. Mint* and Mint Oil* | |

* These active ingredients are exempt for use on all food commodities from the requirement of a tolerance on all raw agricultural commodities at 40 CFR 180.1164(d). Note that the remaining substances may not have tolerance for all food crops.

ISSUES OF CONCERN

Certain products may be marketed as EPA-exempt in some cases by listing an active ingredient that appears on the "25b" list, while claiming all other ingredients are non-active. This could cause some confusion as to the nature of the product. For instance, vinegar is permitted in exempt products only as a non-active ingredient at less than 8% concentrations. (Acetic acid at levels over 8% is considered to be a List 4B inert, which is not permitted in 25b exempt products.) A number of herbicides based on acetic acid are on the market, some registered and others claiming to be exempt, with citric acid or some other ingredient listed as the active.

Producers should carefully examine the list of ingredients in all exempt products to assess compliance with NOP requirements, and to make sure they are aware of all ingredients, active and inert. Exempt products are entitled to make an organic production claim, but this claim is not verified by EPA.

It may be considered a violation of federal law to make either a verbal or a written pesticidal claim for a specific product that is not registered by EPA, or legally exempt from EPA registration. Farmers who use unregistered pesticides may be in violation of FIFRA if this results in illegal residues on the

crop. Although some products may be on the market, if they are not registered or legally exempt they cannot be researched or recommended by university Extension personnel. This makes it difficult to assess efficacy for some of these unregistered products, due to lack of university studies.

EPA ORGANIC LABEL PROGRAM

The EPA established a voluntary labeling program in 2003 that permits the use of the term "for organic production" on pesticide labels for products that are compliant with NOP regulations. The EPA will review the product formulation to verify that the active and inert ingredients are compliant. They will not permit this term to be used if other (alternate) non-compliant formulations are marketed under the same registration number. EPA also requires that all label instructions are consistent with organic standards.

Organic growers may continue to use pesticide products that do not display the EPA approval if these products comply with the NOP rule. Some pesticide formulators may not want to limit pesticide instructions to only organic uses, so these products will not have the EPA organic label. For instance, soaps are currently on the NOP list as an insecticide but not as a fungicide, so it is unlikely that products labeled for both uses would be reformulated to remove this use. Products approved under this program may bear the logo and words:



For Organic Production

Pesticide products that are exempt from EPA registration may make an organic claim, but are not subject to EPA review. They are subject to enforcement actions if the claims are fraudulent. A number of the permitted active ingredients for 25b-exempt products are synthetic and not permitted as active ingredients according to the NOP National List (including: sodium lauryl sulfate, lauryl sulfate, 2-Phenethyl Propionate, potassium sorbate).

EPA registered products that carry the "for organic production" label claim have been verified as meeting the NOP requirements. Unregistered products that claim EPA exemption and "for organic production" should be reviewed carefully by users to make sure they do in fact meet NOP requirements.

RESOURCES

EPA Lists of Inert Ingredients:

<http://www.epa.gov/opprd001/inerts/lists.html>

EPA Pesticide Registration Notice, Minimum Risk Pesticides Exempt from Registration http://www.epa.gov/PR_Notices/pr2000-6.pdf

EPA Pesticide Registration Notice, Labeling of Pesticide Products under the National Organic Program.

http://www.epa.gov/opppmsd1/PR_Notices/pr2003-1.pdf.

EPA link to FIFRA regulations

<http://www.epa.gov/pesticides/regulating/cfr.htm>

Oregon Dept. of Agriculture. 2002 Fact Sheet for Vinegar /Acetic Acid Recommendations. http://oregonstate.edu/dept/nursery-weeds/weed-speciespage/acetic_acid_factsheet.pdf

USDA-NOP National List
<http://www.ams.usda.gov/nop/NationalList/ListHome.html>